

What is claimed is:

1. A sample processing device comprising:
a rectangular body; and
5 a plurality of process arrays located within the body, each of the process arrays comprising an input chamber, an output chamber, and a primary process chamber located between the input chamber and the output chamber, wherein the primary process chambers of the plurality of process arrays are arranged in a circular arc;
wherein the input chambers of the plurality of process arrays are arranged in
10 rectilinear grid array, and further wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a rectilinear grid array.
2. A device according to claim 1, wherein the input chambers of at least two of the process arrays comprise a common input chamber.
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3. A device according to claim 1, the device further comprising a secondary process chamber located between the primary process chamber and the output chamber of each of the process arrays, wherein the secondary process chambers of the process arrays are arranged in a circular arc.
4. A device according to claim 3, wherein the circular arc of the primary process chambers and the circular arc of the secondary process chambers are concentric arcs.
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5. A device according to claim 1, wherein the input chambers of the plurality of process arrays are arranged along a straight line.
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6. A sample processing device comprising:
a rectangular body; and
30 a plurality of process arrays located within the body, each of the process arrays comprising an input chamber, an output chamber, and a primary process chamber located between the input chamber and the output chamber;

wherein the primary process chambers of the plurality of process arrays are arranged in a circular arc;

and wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a rectilinear grid array; and

5 and further wherein the input chambers of the plurality of process arrays are arranged along in a rectilinear grid array, and wherein the input chambers of at least two of the process arrays comprise a common input chamber.

10 7. A device according to claim 6, the device further comprising a secondary process chamber located between the primary process chamber and the output chamber of each of the process arrays, wherein the secondary process chambers of the process arrays are arranged in a circular arc.

15 8. A device according to claim 7, wherein the circular arc of the primary process chambers and the circular arc of the secondary process chambers are concentric arcs.

9. A device according to claim 6, wherein the input chambers of the plurality of process arrays are arranged along a straight line.

20 10. A sample processing device comprising:
a rectangular body; and
a plurality of process arrays located within the body, each of the process arrays comprising an input chamber, an output chamber, a primary process chamber located between the input chamber and the output chamber, and a secondary process chamber located between the primary process chamber and the output chamber, wherein the primary process chambers of the plurality of process arrays are arranged in a circular arc;

25 wherein the input chambers of the plurality of process arrays are arranged in rectilinear grid array, and further wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a rectilinear grid array.

11. A device according to claim 10, wherein the input chambers of at least two of the process arrays comprise a common input chamber.

5 12. A device according to claim 10, wherein the input chambers of the plurality of process arrays are arranged along a straight line.

13. A sample processing device comprising:
a rectangular body; and
a plurality of process arrays located within the body, each of the process arrays comprising an input chamber, an output chamber, and a primary process chamber located between the input chamber and the output chamber, wherein the primary process chambers of the plurality of process arrays are arranged in a circular arc, and wherein the input chambers of at least two of the process arrays comprise a common input chamber;
15 wherein the input chambers of the plurality of process arrays are arranged in rectilinear grid array, and further wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a rectilinear grid array.

20 14. A device according to claim 13, the device further comprising a secondary process chamber located between the primary process chamber and the output chamber of each of the process arrays, wherein the secondary process chambers of the process arrays are arranged in a circular arc.

25 15. A device according to claim 14, wherein the circular arc of the primary process chambers and the circular arc of the secondary process chambers are concentric arcs.

16. A device according to claim 13, wherein the input chambers of the plurality of process arrays are arranged along a straight line.

30 17. A sample processing device comprising:
a rectangular body; and

a plurality of process arrays located within the body, each of the process arrays comprising an input chamber, an output chamber, and a primary process chamber located between the input chamber and the output chamber, wherein the primary process chambers of the plurality of process arrays are arranged in a circular arc, and
5 wherein the input chambers of all of the process arrays comprise a common input chamber;

wherein the output chambers of the process arrays of the plurality of process arrays are arranged in a rectilinear grid array.

- 10 18. A device according to claim 17, the device further comprising a secondary process chamber located between the primary process chamber and the output chamber of each of the process arrays, wherein the secondary process chambers of the process arrays are arranged in a circular arc.
- 15 19. A device according to claim 18, wherein the circular arc of the primary process chambers and the circular arc of the secondary process chambers are concentric arcs.